

*Before the*  
**Federal Communications Commission**  
Washington, DC 20554

In the matter of

Implementation of Section 304 of the  
Telecommunications Act of 1996

CS Docket No. 97-80

Commercial Availability of Navigation  
Devices

Compatibility Between Cable Systems and  
Consumer Electronics Equipment

PP Docket No. 0067

**COMMENTS OF THE ELECTRONIC FRONTIER FOUNDATION**

The Electronic Frontier Foundation (“EFF”) hereby submits these comments in connection with the Commission’s *Further Notice of Proposed Rulemaking*, FCC No. 03-3 (Jan. 10, 2002) (“FNPRM”) in the above-captioned proceedings.

**I. INTRODUCTION.**

EFF welcomes the opportunity to address the issues raised by the Memorandum of Understanding<sup>1</sup> (“MOU”) filed by the Consumer Electronics Association (“CEA”) and National Cable and Telecommunications Association (“NCTA”).

In order to properly clarify the scope of the MOU, EFF writes to ask that the Commission clarify in its rules that all basic tier services, whether analog or digital and including all retransmitted over-the-air broadcasts, must remain unencrypted.

**II. STATEMENT OF INTEREST.**

EFF is a membership-supported nonprofit organization devoted to protecting civil liberties and free expression in the digital age. With nearly 9,000 dues-paying members and over 30,000 mailing-list subscribers, EFF leads the global and national effort to ensure that fundamental liberties are respected in the digital environment.

EFF has become increasingly involved in issues relating to the digital television transition, representing consumers, hobbyists and innovators in a

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<sup>1</sup> Filed Dec. 19, 2002, attached as Appendix B to the FNPRM, FCC No. 03-3A2.

number of inter-industry discussion groups such as the Broadcast Protection Discussion Group. EFF has also contributed comments in the Commission's "broadcast flag" docket.<sup>2</sup> In the course of these efforts, EFF has become intimately familiar with the content protection technologies discussed in the MOU.

### **III. DIGITAL OVER-THE-AIR BROADCASTS MUST REMAIN UNENCRYPTED WHEN RETRANSMITTED OVER CABLE.**

When considering "plug & play" compatibility between cable systems and consumer electronics, one category of cable service stands out as an oasis of compatibility in the desert of incompatible proprietary set-top boxes—the analog basic tier.

A consumer interested in only analog basic tier service (which generally includes all local over-the-air broadcast channels) need not fret about compatibility. Where analog basic tier service is concerned, the consumer can hook up any device capable of receiving NTSC television signals—whether a TV, VCR, PVR, or "media PC"—without worrying about compatibility. Device makers, hobbyists and innovators need not worry about the maze of incompatible set-top box technologies.

An enormous quantity of consumer product innovation has thrived in this oasis of compatibility—the VCR, PVR and "media PC" all owe their existence to the fact that, whatever else can be said about them, they could *at minimum* receive both over-the-air and basic cable tier programming.

Of course, the Commission's current efforts in this docket are aimed at extending this oasis of "plug & play" compatibility to the digital non-basic tiers, to allow consumers the same compatibility with digital conditional access programming (such as HBO and pay-per-view) as they enjoy today with basic tier service.

While EFF strongly supports this effort to facilitate greater compatibility for services other than the basic tier, it is critical that the basic tier oasis of compatibility not be damaged in the process. Consumers should, *at a minimum*, continue to have access to an unscrambled basic tier of cable service, which includes any over-the-air broadcast channels (whether digital or analog) that are being retransmitted by their cable provider.

Accordingly, we ask that the Commission clarify in its rules that all basic tier services, whether analog or digital and including all retransmitted over-the-air broadcasts, must remain unencrypted.

#### **A. FCC Rules Need Clarification.**

A clear understanding of the status of the basic tier is critical to defining the scope of the MOU's provisions. If cable providers encrypt their digital basic tier services, then consumers would have to use a point of deployment ("POD")

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<sup>2</sup> FCC MB No. 02-230.

module in order to receive *any* digital cable programming, even over-the-air broadcast content. If this is the case, then the MOU would be tantamount to a technology mandate on *all* devices that can connect to digital cable services.

The oasis of basic tier compatibility would be destroyed, supplanted by the technology standards in the MOU. This approach would impose the requirements of the MOU on all consumers and innovators who seek to attach anything to the digital cable jacks in their homes. EFF submits that any who support such an outcome have a very heavy burden to shoulder—they must demonstrate that the MOU’s regime, backed by regulatory fiat, fosters more “plug & play” compatibility than the existing free market in standards-compliant devices. They must also persuade the Commission to change its existing rules, which appear to require that digital basic tier services be unencrypted.

The better interpretation of the Commission’s rules would cabin the scope of the MOU to those devices that are capable of receiving *non-basic* tier cable services. On this view, the MOU extends some compatibility into the desert formerly dominated by incompatible set-top boxes, while leaving the oasis of basic tier compatibility intact. Technology vendors who are content to interoperate solely with the digital programming available on the basic tier could continue to count on full compatibility by simply implementing straightforward QAM receivers according to well-understood standards, such as SCTE 40 2001 as amended by DVS/535. They would remain free to ignore the MOU altogether.

Based on our reading of the Commission’s rules, it appears that all basic tier services (whether analog or digital, and including all retransmitted over-the-air broadcasts) must remain unencrypted (i.e. “unscrambled”). The Commission has previously ruled that, at least in the must carry context, both digital and analog broadcast signals must be available in a single, unitary basic tier.<sup>3</sup> The Commission’s rules further provide that all basic tier services must be unencrypted.<sup>4</sup>

Unfortunately, the Commission’s rules are not entirely clear on this point, and our conversations with stakeholders in the cable and consumer electronics industries indicate that they are uncertain regarding the issue. Accordingly, in order to clarify the scope of the MOU, the Commission should in this proceeding clarify and reaffirm its rules requiring that basic tier services remain unencrypted.

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<sup>3</sup> See First Report and Order and Further Notice of Proposed Rule Rulemaking, FCC No. 01-22 (released Jan. 23, 2001), at p. 46, ¶ 102. The Commission recognized, however, that this requirement would be lifted were the cable operator able to demonstrate that it faced effective competition under 47 U.S.C. §543(l)(1). *Id.*

<sup>4</sup> See 47 C.F.R. §76.630(a). This requirement is subject to waiver where a cable operator can “demonstrate either a substantial problem with theft of basic tier service or a strong need to scramble basic signals for other reasons.” *Id.*

**B. An Unencrypted Basic Tier Benefits Consumers, Innovation and Will Speed the DTV Transition.**

The continued availability of an unencrypted basic tier will benefit consumers in at least three ways. First, it would guarantee that legacy equipment that includes QAM tuners would continue to function as it does today. Second, it would minimize the need for redundant antenna systems to receive over-the-air broadcasts for devices that lack POD modules. Third, it would guarantee consumers the fruits of a robust free-market in basic-cable capable technologies.

Devices capable of receiving unencrypted digital basic tier programming are already on the market. For example, the premier high-definition rear-projection widescreen television offered by Mitsubishi includes a QAM-capable tuner, and thus is able to receive unencrypted digital cable programming.<sup>5</sup> Similarly, Zenith has announced two HD-capable PVRs that include QAM tuners for recording from digital cable services.<sup>6</sup> If cable providers encrypt the digital basic tier, the QAM tuners in these products will be useless. Because these devices do not include the POD modules envisioned by the MOU, their owners will be forced to use a set-top box that may limit other features and compatibility. This outcome is likely to alienate “early adopter” consumers, whose enthusiasm and early investment may be critical in jump-starting the DTV transition.

Although QAM-capable receivers are not widespread today, their number can be expected to increase in the period before the MOU takes effect and is implemented by cable MSOs. More importantly, the Commission should make every effort to *increase* the penetration of these interim “Digital Cable—Basic Ready” devices, pending the introduction of POD-capable devices by consumer electronics manufacturers. After all, it would be a serious setback to the ongoing DTV transition if “early adopter” consumers were to put off their HD television purchases until POD-capable units arrived on the market.

In addition to protecting legacy QAM-capable devices, an unencrypted basic tier will ensure “compatibility parity” for broadcast signals, whether received over-the-air or from basic tier cable service. This will spare consumers from having to rig up redundant antenna systems to receive over-the-air digital broadcast signals to take advantage of devices and device features that may be “off-limits” under the regime envisioned by the MOU.

Where compatibility is concerned, over-the-air broadcast signals are plainly superior to the POD-module regime envisioned by the MOU. After all, any device capable of receiving 8VSB ATSC signals can receive over-the-air digital broadcasts. ATSC device makers today are not limited by the restrictions of the DFAST/5C licenses. Accordingly, at least some ATSC devices can be

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<sup>5</sup> See Gary Merson, *Mitsubishi WS-55711 55” HD Rear-Projection Television*, THE PERFECT VISION (Nov./Dec. 2002) at p.59.

<sup>6</sup> See Zenith Press Release, “Zenith Digital TV Set-Top Receivers Include HDTV Digital Recorders” (Jan. 9, 2003) (available from [http://www.zenith.com/sub\\_news/news\\_Display.asp?action=view&id=485&cat=&year=](http://www.zenith.com/sub_news/news_Display.asp?action=view&id=485&cat=&year=)).

expected to offer features that POD-capable devices subject to the MOU will be unable to match.<sup>7</sup>

Imagine, for example, that TiVo wanted to build a PVR capable of recording ATSC broadcasts<sup>8</sup> and streaming them to multiple televisions over a home network utilizing gigabit Ethernet.<sup>9</sup> Such a hypothetical “multi-room super-TiVo” device would not be compatible with devices that include POD-modules under the MOU, as the DFAST/5C licenses do not permit gigabit Ethernet as a permissible output. But consumers may want the device anyway. If the basic tier were unencrypted, TiVo could simply include a QAM tuner in the product and it would be able to record over-the-air broadcast signals (but still not be able to record any encrypted digital services, as it would lack a POD module). In contrast, if the basic tier were encrypted, the consumer would have to rig up a separate ATSC antenna in order to use this “super-TiVo,” even though the very same content were also being delivered as part of his basic tier cable service.

This hypothetical illustrates the third benefit of an unencrypted basic tier to consumers: the fruits of the robust, free market for DTV innovation made possible by the oasis of basic tier compatibility. It is axiomatic that innovation flourishes best, and prices fall quickest, in a free market unhindered by government regulation. Whether or not some regulation for non-basic tier service is necessary in order to foster compatibility, there is no justification for similar intrusion into the market for devices that are content to receive only the basic tier.<sup>10</sup>

### **C. The Commission Should Provide for a “Digital Cable—Basic Ready” Label.**

In addition to clarifying its rules forbidding the encrypting of digital basic tier signals, the Commission should leave room in the “cable-ready” labeling regime for products that are “basic tier ready.”

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<sup>7</sup> This will remain true even if the Commission were to adopt the “broadcast flag” mandate currently being considered in FCC MB No. 02-230. Under any version of that proposal, content protection technologies other than the DFAST/5C technologies would be permissible. To the extent this is true, there may well be features available to “broadcast flag” compliant ATSC devices that would not be available to POD-capable devices under the MOU.

<sup>8</sup> TiVo has announced that it will be producing a PVR capable of recording DTV broadcasts. *See* <http://www.tivo.com/5.3.1.1.asp?article=164>.

<sup>9</sup> Such a system can be assembled today using off-the-shelf PC technologies. While such a set-up would be costly today, the price of the PVR and networking equipment would be trivial compared to the price of the HD-capable display devices. So consumers who have already invested in HD-capable displays could easily add this “multi-room” HD-PVR capability for a relatively modest sum. This would not be possible for devices subject to the DFAST/5C license, as the content protection technologies approved for use do not support Ethernet as a permitted output.

<sup>10</sup> Some may suggest that there is no market for such devices, that all consumer electronics manufacturers will want to build devices capable of working with all unidirectional cable services. EFF submits that this is a theory best tested in the market. Certainly no one has suggested any compelling reason to preemptively eliminate the market for devices that are basic tier compatible, but not DFAST/5C compatible.

The MOU proposes regulations that restrict the “Digital Cable Compatible” label to unidirectional digital cable products that (1) tune NTSC analog channels; (2) tune QAM digital channels; (3) navigate channels using relevant cable standards; (4) include a POD-Host Interface; and (5) respond to Emergency Alerts transmitted in accordance with relevant standards.<sup>11</sup>

EFF proposes that the Commission add an additional labeling category that denotes “digital cable—basic ready” for devices that satisfy all of the same requirements, but that omit the POD-Host Interface. This label will notify cable subscribers that the product behaves like the VCRs, PVRs, and “media PCs” with which they are familiar—the product can receive basic tier programming simply by being connected to any active cable jack in the home.

**D. Content Protection for the Digital Basic Tier is Properly Addressed in the Commission’s “Broadcast Flag” Docket, Rather than by the MOU.**

The Commission currently permits encryption of basic tier services where a cable MSO can “demonstrate either a substantial problem with theft of basic tier service or a strong need to scramble basic signals for other reasons.”<sup>12</sup> Some may suggest that encryption of digital basic tier services is necessary in order to address the perception that digital broadcasts are more vulnerable to unauthorized copying and redistribution than their analog basic tier counterparts.

While there is much to be said about this subject, it is EFF’s view that the issue is more properly addressed (and has been addressed at length) in another proceeding currently underway, MB 02-230, where the Commission is currently considering whether to adopt a “broadcast flag” mandate on makers of DTV receivers and downstream products.<sup>13</sup> To the extent that digital broadcast content may be susceptible to additional risks of unauthorized copying or redistribution, there is no reason that the very same programming, when retransmitted as part of the basic tier on cable, should require different treatment.

In fact, the entertainment industries and broadcast networks appear to have implicitly recognized this principle in the “broadcast flag” proceeding. The “broadcast flag” proposal endorsed by them in that proceeding would impose the same content protection obligations on all devices capable of receiving digital television signals, whether from ATSC over-the-air broadcasts or QAM digital cable sources. Accordingly, the Commission already has before it in MB-02-230 the question of what amount of content protection is warranted for digital television signals (whether over broadcast or cable).

Consequently, the need for “content protection” should not be the basis for any independent encryption obligations on the part of cable MSOs in the basic tier context.

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<sup>11</sup> See MOU §3.5.

<sup>12</sup> 47 C.F.R. §76.630(a).

<sup>13</sup> EFF has submitted both initial and reply comments in that docket.

#### **IV. CONCLUSION.**

For the reasons above, EFF respectfully asks that the Commission clarify in its rules that all basic tier services, whether analog or digital and including all retransmitted over-the-air broadcasts, must remain unencrypted.

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